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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/728,084	EROMAKI, PENTTI JUHANI	
	Examiner	Art Unit	
	Steven D. Maki	1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10-15-07*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-42* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☒ Interview Summary (PTO-413) Paper No(s)/Mail Date. *121807*.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

1) The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2) Claims 1-42 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As to claims 1, 16, 38 and 39, the subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention (i.e. the **new matter**) is the subject matter of the at least one anti-slip stud entering the stud capturing space in a first stud orientation with respect to the center line and, by contact of each of the jaw fingers with ...the bottom flange, the at least one anti-slip stud is rotated about the stud center line relative to the jaw fingers from the first stud orientation to a second predetermined stud orientation, if the first stud orientation differs from the predetermined stud orientation, as the stud is driven through the stud capturing space. It is noted that the initial stud orientation in claim 39 corresponds to the first stud orientation in claims 1, 16 and 38.

There is no explicit support for the above noted subject matter in the original disclosure. Moreover, there is insufficient information in the original disclosure to conclude that (1) the anti-slip stud entering "stud capturing space" may have a "first

orientation" different from the predetermined stud orientation and/or (2) the part(s) of the stud installation tool not shown permit(s) rotation of the stud at any time during installation. The original disclosure fails to reasonably convey that applicant had possession of the claimed possibly different first orientation. Figures 15 16A, 16B, 16C, 16D fail to teach that the stud 20 can rotate at any location above the distal ends of the tip portions of the fingers. The capability to rotate is not inherent in Figures 15 16A, 16B, 16C, 16D because the detail of complete structure of the installation tool including any guide means / feeding means is not shown. When viewed as a whole, the original disclosure fails to establish that applicant contemplated the capability of the stud to rotate at least 360 degrees as it moves as shown in Figures 16A, 16B, 16C and 16D.

Figure 15, page 5 lines 22-24, page 16 lines 13-15 and page 19 lines 8-9 and Figures 16A-16D fail to teach the stud having a different first orientation at a location before the tips of the jaw fingers. The description of "the first type of bottom flange configuration is utilized together with the jaw fingers of [the] installation tool to attain a predetermined orientation of the studs" at page 5 lines 22-24 is consistent with the disclosed step of rotating the fingers to orient the studs.

The original disclosure describes feeding an anti-slip stud 20 by means of a plunger (page 19). Figures 16A-16D illustrate the stud being fed from a location above the top point 15 of the jaw fingers 3, 4, 5, 6 (figure 16A) to a location in the hole in the tread (figure 16D). This feeding arrangement shown in figures 16A to 16D of the original disclosure is substantially the same as that shown in figures 3-5 of Petterson. In figures 3-5, Petterson shows guiding the plunger 22 and a stud using a sleeve 25.

However, the original disclosure fails to illustrate and/or describe what tool structure is used to feed the stud to the location illustrated in figure 16A. The original disclosure also fails to illustrate and/or describe what tool structure is used to guide the plunger 11 shown in figures 16A and 16D. Since the specification is silent as to tool structure used to feed the studs to the fingers and/or guide the plunger, it would be speculation to conclude that the orientation of the stud changes as the stud is being driven through the stud capturing space.

It is acknowledged that the original disclosure describes installing studs in a tire tread such that they are in a predetermined stud orientation. However, the original disclosure teaches obtaining this result either by rotating the fingers of the installation tool or using studs having different cermet piece orientations instead of by changing the orientation of the stud as the stud is driven through the stud capturing space.

In summary, the subject matter of

> the at least one anti-slip stud entering the stud capturing space in a first stud orientation with respect to the center line and, by contact of each of the jaw fingers with ...the bottom flange, the at least one anti-slip stud is rotated about the stud center line relative to the jaw fingers from the first stud orientation to a second predetermined stud orientation, if the first stud orientation differs from the predetermined stud orientation, as the stud is driven through the stud capturing space

is not inherent in the original disclosure. It is emphasized that a different first stud orientation is not inherent and consequently, the capability of the stud to rotate from a different stud orientation to a predetermined stud orientation is not inherent. The mere fact that a certain thing (rotation) may result from a given set of circumstances (freedom to rotate and different first stud orientation) is not sufficient to establish inherency. See

MPEP 2163.07(a). The claims require a first stud orientation which may be different than the predetermined stud orientation. The original disclosure fails to show that applicant had possession of a first stud orientation which may be different than the predetermined stud orientation. Furthermore, the freedom of the stud to rotate between the fingers is required by the claims. The original disclosure fails to show that applicant had possession of the freedom of the stud to rotate between the fingers

3) Claims 1-42 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

In claims 1, 16, 38 and 39, the subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention (i.e. **the non-enabled subject matter**) is the subject matter of the at least one anti-slip stud entering the stud capturing space in a first stud orientation with respect to the center line and, by contact of each of the jaw fingers with ...the bottom flange, the at least one anti-slip stud is rotated about the stud center line relative to the jaw fingers from the first stud orientation to a second predetermined stud orientation, if the first stud orientation differs from the predetermined stud orientation, as the stud is driven through the stud capturing space. It is noted that the initial stud orientation in claim 39 corresponds to the first stud orientation in claims 1, 16 and 38.

The original disclosure describes feeding an anti-slip stud 20 by means of a plunger (page 19). Figures 16A-16D illustrate the stud being fed from a location above the top point 15 of the jaw fingers 3, 4, 5, 6 (figure 16A) to a location in the hole in the tread (figure 16D). This feeding arrangement shown in figures 16A to 16D of the original disclosure is substantially the same as that shown in figures 3-5 of Petterson. In figures 3-5, Petterson shows guiding the plunger 22 and a stud using a sleeve 25. However, the original disclosure fails to illustrate and/or describe what tool structure is used to feed the stud to the location illustrated in figure 16A. The original disclosure also fails to illustrate and/or describe what tool structure is used to guide the plunger 11 shown in figures 16A and 16D. Since the specification is silent as to tool structure used to feed the studs to the fingers and/or guide the plunger, the specification fails to teach how the orientation of the stud changes as the stud is driven through the stud capturing space.

It is acknowledged that the original disclosure describes installing studs in a tire tread such that they are in a predetermined stud orientation. However, the original disclosure teaches obtaining this result either by rotating the fingers of the installation tool or using studs having different cermet piece orientations instead of by changing the orientation of the stud as the stud is driven through the stud capturing space. The original disclosure fails to provide any guidance to enable one of ordinary skill in the art as to the tool structure(s) required for changing the orientation of the stud as the stud is driven through the stud capturing space. It is emphasized that the original disclosure provides insufficient information and illustration of the means used in addition to the

fingers and plunger to create the function as claimed. It is noted that Figures 16A-16D fail to show any change in orientation of the stud as it is inserted into the recess.

4) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5) **Claims 1-6, 8-22 and 30-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pettersson (US 3,385,742) in view of Ostrovskis (US 2002/0050312) and Russia (RU 2,152,318).**

Pettersson discloses a method for making a studded tire comprising: providing a motor vehicle tire 10 (pneumatic tire) having a tread; forming holes 11 in the tread; providing studs wherein each stud comprises a bottom flange 13, a neck 15, a bowl 15 and a tip 16 (figure 1); providing an installation tool having "a number of fingers" (col. 4 lines 16-17) such as three fingers 17, 18, 19; and using the installation tool to install the studs in the holes wherein the fingers are inserted in the hole, the stud is moved through the bore 20 of a sleeve 25 using plunger 22 such that the stud is pressed against the shoulders of the fingers to force the fingers radially outward when the stud flange 13 is sliding along the fingers into its bottom position in the hole between the end portions of the fingers; maintaining the plunger in contact with the stud and simultaneously withdrawing the fingers from the hole so that the plunger prevents withdrawal of the stud from the hole. As shown in figures 3-5, the fingers have narrowing tip portions. Pettersson states "... positioning a spike [stud] between the

fingers and within the hole. Finally, the fingers are withdrawn from the hole, permitting the wall of the hole to contract to its original shape and thereby firmly grip the spike to safely anchor the same in a correct position" (col. 1 lines 56-60). Hence, Pettersson teaches positioning the stud using the fingers and maintaining the position of the stud using material of the tread. Pettersson substantially discloses (1) the claimed combination of tire and studs and tool and (2) the claimed method of installing studs. Pettersson does not recite the stud having a bottom flange with *the claimed shape*.

Ostrovskis discloses a stud 1 for a motor vehicle tire comprising a bottom flange 2, a neck 3, a bowl 4 and a tip 5. See figure 1. The cross-sectional shape of the root (bottom flange 2) is out of round. The out of round shape may for example be oval or rounded rectangle. The cross-sectional shape of the upper part (tip 5, bowl 4) is also out of round. The longitudinal axis of the out or round root (flange) and the longitudinal axis of the upper part enclose an angle of for example 65-115 degrees. Ostrovskis teaches that the out of round bottom flange of the stud can be oriented in the tread such that tilting of the stud in the rubber under load conditions is reduced so as to reduce heating and aging of the tread rubber. Ostrovskis also discloses orienting the out of round tip in the tread so as to shorten braking distance and reduce traction. For installation of the stud in a tread, Ostrovskis teaches guiding the stud to the tread using a pipe (tube) having a cross section corresponding to the cross section of the stud so that the stud can be seated in the tread at the proper angular position.

Russia discloses a tire studding device comprising a charging tube, guide tube 11, lips 14 (fingers) for widening a hole in the tread of the tire, a pusher 16 with drive to

insert an anti-skid stud into the widened hole and a drive starter wherein the charging tube and guide tube 11 are provided with guide members for orientation of the antiskid stud. The section profile of the tubes (e.g. 11) meets the section profile of the anti-skid stud. See abstract and figures. The stud comprises a tip 5, body 1, and bottom flange 2. See figures 11 and 12. The stud may have a generally triangular cross-sectional shape (figure 11) or a generally rectangular cross sectional shape (figure 3). When installing a stud having a generally triangular cross section, Russia shows using three pushers 16 - one pusher for each side of the bottom flange. See figure 19.

As to claims 1, 16, 38 and 39, it would have been obvious to one of ordinary skill in the art to use "non-round" tire studs in Pettersson's process for installing studs in premade holes in a tire tread since (1) Ostrovskis, also disclosing a stud for a tire tread having a bottom flange, neck, top bowl and tip, suggests using **out of round cross-sectional shape (e.g. oval, rounded rectangle)** for the tip and bottom flange of a stud *to improve braking and traction of the tire and to prevent tilting of the stud to reduce heating and aging of the tread rubber* and (2) Russia teaches inserting **"out of round" studs** into premade holes in a tire tread *using an apparatus similar to that of Pettersson*. One of ordinary skill in the art would have had a reasonable expectation of success using Pettersson's stud installation tool to install out of round studs into premade holes. Pettersson and Ostrovskis both guide a stud through a tube toward the tread. Pettersson and Russia both guide a stud through a tube toward a tread with Russia additionally teaching installing out of round studs into premade holes using a stud installation tool similar to that of Pettersson. Ostrovskis and Russia motivate one

of ordinary skill in the art to use "non-round" tire studs in Pettersson's process for installing studs in premade holes in a tread. Ostrovskis for example motivates one of ordinary skill in the art to use non-round studs to improve braking and traction of the tire and to prevent tilting of the stud to reduce heating and aging of tread rubber.

As to claim 1: With respect to the number of first side portions and second side portions, the out of round cross-sectional shape (e.g. oval stud) suggested by Ostrovskis has two first side portions at a short distance from the stud center and two second side portions at a greater distance from the stud center. Alternatively, the out of round cross-sectional shape (e.g. generally rectangular stud) suggested by Russia has two first side portions at a short distance from the stud center and two second side portions at a greater distance from the stud center. Furthermore, it would have been obvious to one of ordinary skill in the art to use four fingers in Pettersson's stud installation tool in view of (1) Pettersson's teaching to use **"a number of fingers"** such as "three radially movable jaw fingers 17, 18, 19" in order to expand the wall of the hole into which the stud is inserted and optionally (2) Russia's suggestion to associate a pusher 16 / lip 14 for *each side* of an out of round stud (see figures 15-19). With respect to the fingers being in contact with at least two first side portions, Pettersson teaches pressing the bottom flange of the stud against the fingers so that the fingers expand. The use of four fingers instead of three fingers is amply suggested by Pettersson's teaching to use a number of fingers such as three. Pettersson is not limited to using only three fingers. One of ordinary skill in the art would readily appreciate from Pettersson's disclosure to use fingers to expand the hole for the stud

that the use of more than three fingers would facilitate expansion of the hole for the stud. The subject matter of the number of jaw fingers being equal to twice the number of second side portions of the stud and two jaw fingers being in contact with two first side portions of the stud is suggested by (A) Pettersson's teaching to contact the bottom flange of a stud with a number of fingers and (B) the out of round cross-sectional shaped bottom flange of the stud suggested by Ostrovskis and/or Russia. This is especially true in view of the teaching in Russia to associate a pusher 16 / lip 14 for *each side* of an out of round stud as suggested by figures 15-19.

As to claim 16: With respect to the number of first side portions and edge portions, the out of round cross-sectional shape (e.g. rounded rectangle) suggested by Ostrovskis has four side portions at a short distance from the stud center and four edge portions (rounded corners) at a greater distance from the stud center. Alternatively, the out of round cross-sectional shape (e.g. generally triangular) suggested by Ostrovskis has three first side portions at a short distance from the stud center and three edge portions (corners) at a greater distance from the stud center. It would have been obvious to one of ordinary skill in the art to use a number of fingers in Pettersson's stud installation tool equal to the number of edge portions in view of (1) Pettersson's teaching to use **"a number of fingers"** such as "three radially movable jaw fingers 17, 18, 19" in order to expand the wall of the hole into which the stud is inserted and (2) Russia's suggestion to use three pushers 16 / lips 14 for a generally triangular stud having three sides and three edge portions - i.e. associate a pusher 16 / lip 14 for each side of an out of round stud (see figures 15-19). With respect to the fingers being in contact with at

least two side portions, Pettersson teaches pressing the bottom flange of the stud against the fingers so that the fingers expand.

As to claims 38, 39 and 42: With respect to oval or polygonal bottom flange, note the suggestion from Ostrovskis and Russia to use an out of round cross sectional shape; it being noted that Ostrovskis teaches using an out of round shape with straight sides (rounded rectangle) as an alternative to an out of round shape with only curved sides (oval). As to claims 38 and 42, it would have been obvious to one of ordinary skill in the art to **turn** Pettersson's stud installation tool such that the fingers are turned as claimed since (1) Pettersson teaches moving the stud through the *guide bore* of a sleeve 25 and using the fingers to correctly position the stud and (2) Ostrovskis and Russia suggest turning a *guide tube* through which out of round studs are moved so that the out of round studs can be disposed in the tread of a tire at a desired orientation. The hard tip in the stud of each of Pettersson, Ostrovskis and Russia is in a constant position with respect to the bottom flange. As to using "cermet" for the hard tip, it would have been obvious to use cermet (e.g. sintered carbide) for the hard tip of the stud as claimed since it is taken as well known / conventional in the tire stud art to use "cermet" (e.g. carbide) for the tip of a tire stud (the cermet material secured in the stud by extending the cermet material a desired length through the body of the stud) so that the remainder of the tire stud can be made of a different material. The claimed non round shape of the tip is suggested by Ostrovskis and Russia. As to claim 39, it would have been obvious to one of ordinary skill in the art to use Pettersson's stud installation tool to **install two types** of studs as claimed in view of Ostrovskis's teaching that different

types of studs may be installed in the tire to obtain optimal force absorption in both straight ahead driving and curved travel to the left or the right. Ostroviskis and Russia suggests turning the tube having a guide bore to orient an out of round stud. Also, none of the claims requires orientation of the studs using jaw fingers without the need for a guide bore or injection pipe. The fingers in Pettersson orient the stud since Pettersson teaches sliding the stud along the fingers to the correct position.

With respect to the subject matter of "the at least one anti-slip stud entering the stud capturing space in a first stud orientation with respect to the center line and, by contact of each of the jaw fingers with ...the bottom flange, the at least one anti-slip stud is rotated about the stud center line relative to the jaw fingers from the first stud orientation to a second predetermined stud orientation, if the first stud orientation differs from the predetermined stud orientation, as the stud is driven through the stud capturing space", the following comments are made: The tips of Pettersson's fingers define a "stud capturing space", Ostrovskis (claim 12) teaches allowing "slight play" during guiding of the spikes (studs) through the pipe and figure 18 of Russia illustrates some space being provided between the guide tube 11 and the bottom flange of the stud. The slight play described by Ostrovskis and the slight space between the tube 11 and bottom flange 2 of the stud shown by Russia suggest configuring the bore of Petterson to permit such slight play when using non round studs. The claimed first / initial orientation reads on the stud having a slightly different orientation with respect to the bore. Since Pettersson's fingers, which are expanded by the studs, have a fixed orientation, Pettersson's fingers are capable of at least slightly rotating a non-round

stud. In other words, the capability of rotating the stud reads on the structure of (1) a guide pipe / tube which allows slight play between the interior surface of the guide pipe / tube as disclosed by Ostrovskis and Russia, (2) the fixed orientation of the fingers of Pettersson and (3) the capability of studs to contact and expand Pettersson's fingers. More importantly: Note the 112 first paragraph rejections. It appears that the 112 first paragraph rejection can only be overcome by deleting the subject matter of the at least one anti-slip stud entering the stud capturing space in a first stud orientation with respect to the center line and, by contact of each of the jaw fingers with ...the bottom flange, the at least one anti-slip stud is rotated about the stud center line relative to the jaw fingers from the first stud orientation to a second predetermined stud orientation, if the first stud orientation differs from the predetermined stud orientation, as the stud is driven through the stud capturing space. Finally, it is noted that "rotated" is interpreted as reading on merely partially rotating the stud instead of rotating the stud 360 degrees.

As to claim 2 (four fingers), see comments on claim 1.

As to claims 3 and 4, Ostrovskis suggests an oval shaped bottom flange.

As to claim 5, it would have been obvious to use hard cermet (e.g. sintered carbide) for the tip of the stud as claimed since it is taken as well known / conventional in the tire stud art to use "cermet" (e.g. carbide) for the tip of a tire stud (the cermet material secured in the stud by extending the cermet material a desired length through the body of the stud) so that the remainder of the tire stud can be made of a different material. The claimed non round shape of the tip is suggested by Ostrovskis and/or Russia.

As to claim 6, Ostrovskis suggests orienting a non-round tip at an angle to the non-round flange.

As to claim 8, Pettersson suggests a circular premade hole. Russia also suggests using a premade hole.

As to claims 9-14 and 40, the claimed fingers read on Pettersson's fingers.

As to claim 15, see shape of bottom surface of the bottom flange in figures 1, 3, 4 of Pettersson. In any event: it would have been obvious to provide the bottom flange of the stud with a bevel as claimed since it is taken as well known / conventional per se in the tire stud art to provide the bottom flange of a tire stud with a bevel in order to facilitate insertion.

As to claims 17-22, note the non-round cross-sectional shape for the bottom flange and the non-round cross-sectional shape for the tip suggested by Ostrovskis and/or Russia. As to claim 21, note comments on claim 5.

As to claim 30, Pettersson suggests a circular premade hole. Russia also suggests using a premade hole.

As to claims 31-36 and 41, the claimed fingers read on Pettersson's fingers.

As to claim 37, see shape of bottom surface of bottom flange in figures 1, 3, 4 of Pettersson. In any event: it would have been obvious to provide the flange of the stud with a bevel as claimed since it is taken as well known / conventional per se in the tire stud art to provide the bottom flange of the tire stud with a bevel in order to facilitate insertion.

6) **Claims 7-8 and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pettersson in view of Ostrovskis and Russia as applied above and further in view of Eromaki (US 6374886).**

As to claims 7-8 and 29-30, it would have been obvious to one of ordinary skill in the art to provide the premade hole with a bottom expansion / at least partly circular expansion as claimed in view of the suggestion from Eromaki, also directed to the tire stud art, to provide an at least partly circular premade hole in which a non-round stud is inserted with a bottom expansion.

7) **Claims 23-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pettersson in view of Ostrovskis and Russia as applied above and further in view of Finland 9/65 or Japan 407 (JP 56-146407).**

It would have been obvious to one of ordinary skill in the art to provide the tire stud with the claimed features as set forth in claims 23-28 in view of (1) the suggestion from Ostrovskis and Russia to use a non-round shape for the tip of the tire stud and (2) the specific non-round shape for the upper portion of a tire stud shown by Finland 9/65 (figure 2) or Japan 407 (figure 5).

Remarks

8) Applicant's arguments with respect to claims 1-42 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments filed 10-15-07 have been fully considered but they are not persuasive.

Applicant argues and examiner agrees that inherent subject matter is not new matter. However, the subject matter of

> the at least one anti-slip stud entering the stud capturing space in a first stud orientation with respect to the center line and, by contact of each of the jaw fingers with ...the bottom flange, the at least one anti-slip stud is rotated about the stud center line relative to the jaw fingers from the first stud orientation to a second predetermined stud orientation, if the first stud orientation differs from the predetermined stud orientation, as the stud is driven through the stud capturing space

is not inherent in the original disclosure. It is emphasized that a different first stud orientation is not inherent and consequently, the capability of the stud to rotate from a different stud orientation to a predetermined stud orientation is not inherent.

Applicant argues that the number of jaw fingers relative to the shape of the flange of the stud (which contacts the jaw fingers) causes the stud to assume the proper stud orientation as it is driven through the fingers, not the components that feed the stud into the space between the jaw fingers and guide the plunger. This argument is not persuasive because the claims require a first stud orientation which may be different than the predetermined stud orientation. The original disclosure fails to show that applicant had possession of a first stud orientation which may be different than the predetermined stud orientation. Furthermore, the freedom of the stud to rotate between the fingers is required by the claims. The original disclosure fails to show that applicant had possession of the freedom of the stud to rotate between the fingers.

With respect to the prior art, the examiner agrees that the applied prior art fail to teach rotating a non round stud at least 360 degrees. However, the original disclosure fails to support this subject matter.

Applicant argues that Pettersson is not concerned with stud orientation relative to its stud center line, Ostrovskis is not concerned with jaw fingers and Russia is not concerned with using jaw fingers to adjust the orientation of the a stud. This argument is not persuasive since Ostrovskis and Russia provide ample motivation (prevent stud tilting) to use non round studs in Pettersson's stud installation tool. There is a reasonable expectation of success since the stud installation tool of Russia is similar to that of Pettersson. It is noted that Pettersson was applied as the primary reference instead of Russia because (1) the claimed plunger corresponds to plunger 22 in Petterson, (2) Pettersson expressly teaches that the spike (stud) is forced against the fingers to separate them, (3) Petterson unambiguously illustrates three fingers (figure 2), (4) Pettersson contains the broad language of "a number of fingers" and (5) Pettersson's stud, like the claimed stud, has a bottom flange and top bowl.

With respect to Ostrovskis, applicant argues that the spike cannot rotate as it moves through the pipe. Examiner agrees that the spike cannot rotate 360 degrees in Ostrovskis pipe. However, the claims fail to require the capability or the step of rotating the stud at least 360 degrees. Furthermore, a spike can rotate slightly in the pipe because there is slight play between the spike and the pipe.

Applicant argues that Ostrovskis does not teach jaw fingers for spreading apart recess since the spikes are shot into a soft unvulcanized tread. This argument is not persuasive since Ostrovskis teaches that non round studs beneficially accept even greater forces from below to prevent tilting and Pettersson teaches using jaw fingers to install studs in holes of a vulcanized tread.

With respect to Russia, applicant argues that the guide tube has the same cross sectional shape as the studs. This argument is not persuasive because a circular guide / feeding tube is neither claimed nor described. Furthermore, Figure 18 of Russia reveals that slight rotation of the stud within the guide tube 11 is possible.

With respect to Russia, applicant argues that the pushers 16 do not contact the flange, there are only two lips and the lips do not contact the stud. This argument is not persuasive. The pushers 16 in Russia correspond to the plunger in Pettersson. In view of the similarity in construction between Russia's installation tool and Pettersson and further in view of Russia illustration of *two pushers* and two lips in Figure 15 and *three pushers* in Figures 17 and 19, examiner asserts that one of ordinary skill in the art would readily appreciate that the tool of Russia does and/or should have three lips (fingers) and (2) the lips (fingers) of Russia do and/or should contact the stud. This conclusion is consistent with Pettersson's disclosure of an elastic ring 28a and Russia's disclosure of an elastic element 15.

Applicant argues that the fact that the number of sides of the bottom flange being equal to the number of pushers in Russia is purely a coincidence. This argument is not persuasive since Russia evidences the desire to use three tool elements instead of two elements to contact the stud during movement of the stud. Furthermore, one of ordinary skill in the art would readily recognize that three pushers 16 and three main sides (two straight, one curved) of the bottom flange 2 are used in the embodiment shown in figure 19. The number of pushers and the number of main sides of the bottom flange 2 are not hidden in figure 19 of Russia.

Applicant's arguments regarding the number of fingers is not persuasive. With respect to a three sided bottom flange, it is undisputed that Pettersson teaches three fingers. With respect to a four sided bottom flange, one of ordinary skill in the art would readily understand from a fair review of Pettersson that Pettersson is not limited to only three fingers. Moreover, it is not seen how four fingers is a non-obvious number of fingers in view of Pettersson's express disclosure of (1) "a number of fingers" and (2) a specific illustrated embodiment of three fingers.

With respect to applicant's arguments regarding reasonable expectation of success, attention is direction to figure 19 of Russia. Also, compare figure 4 of Pettersson with figure 16 of Russia.

Applicant argues that Ostrovskis and Russia's devices employ substantially different technology from that of Pettersson. Examiner disagrees since Ostrovskis, Russia and Pettersson disclose a tool in which a stud is feed toward a tire through a bore having a cross section corresponding to that of the stud. Also, compare figure 4 of Pettersson with figure 16 of Russia.

9) No claim is allowed.

10) Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Steven D. Maki
December 23, 2007

Steven D. Maki 12-23-07
STEVEN D. MAKI
PRIMARY EXAMINER